09/521,545

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     (FILE 'HOME' ENTERED AT 09:20:39 ON 05 JAN 2002)

     FILE 'REGISTRY' ENTERED AT 09:21:54 ON 05 JAN 2002
L1            0 S 106-90-01/RN

     FILE 'REGISTRY' ENTERED AT 09:22:22 ON 05 JAN 2002
L2            0 S (106-90-01)/RN
L3            1 S (106-90-1)/RN
L4              STRUCTURE UPLOADED
L5          199 S L4 SSS FULL

     FILE 'CAPLUS' ENTERED AT 09:24:11 ON 05 JAN 2002
L6          736 S L3 OR L5
L7          484 S L6 AND (POLYMER?)
L8            7 S L7 AND (NUCLEIC OR NUCLEOTID? OR DNA OR TARGET?)
L9           33 S L6 AND (DIAZO? OR AZO? OR AZID? OR PHOTOREACT? OR PHOTO-REACT
L10           2 S L6 AND (ARYL)(3A)(KETON?)
L11          26 S L7 AND L9
L12          26 DUP REM L11 (0 DUPLICATES REMOVED)
L13          26 S L12
L14          25 S L12 NOT (L8 OR L10)

     FILE 'REGISTRY' ENTERED AT 09:48:56 ON 05 JAN 2002
L15           1 S 106-91-2/RN
L16           1 S 106-90-1/RN

     FILE 'CAPLUS' ENTERED AT 09:50:27 ON 05 JAN 2002
L17        3757 S L15
L18          34 S L17 AND (TARGET? OR NUCLEIC OR NUCLEOTIDE? OR DNA)
L19           0 S L18 AND (ARYL)(3A)(KETONE? OR PHOTOINITIAT?)
L20           2 S L18 AND PHOTO?
L21         145 S L17 AND AZOBIS?
L22           3 S L21 AND L18

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3,654,240

L8 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1988:625808 CAPLUS
DN 109:225808
TI Isolation of enzymes from aqueous mixtures using affinity chromatography
IN Call, Hans Peter; Emeis, Carl Christian; Mueller-Schulte, Detlef
PA Fed. Rep. Ger.
SO Ger. Offen., 5 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3613407	A1	19871022	DE 1986-3613407	19860421
	DE 3613407	C2	19920521		
	WO 8706596	A2	19871105	WO 1987-EP214	19870421
	WO 8706596	A3	19880407		
	W: AT, AU, CH, DE, DK, FI, GB, JP, KR, LU, NL, NO, SE, SU, US				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	AU 8775455	A1	19871124	AU 1987-75455	19870421
	EP 282496	A1	19880921	EP 1987-904036	19870421
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	JP 01500836	T2	19890323	JP 1987-503809	19870421
	DK 8706685	A	19880119	DK 1987-6685	19871218
PRAI	DE 1986-3613407		19860421		
	WO 1987-EP214		19870421		

AB Affinity chromatog. compns. are prepd. by coupling monomeric or oligomeric substances which are partial substrate and/or competitive inhibitors, or are substrate analogs and/or inhibitors, with epoxide-contg. plastics (e.g. polyethylene, polyamide, etc.). By use of readily available plastics and ligands, a significant savings can be realized for the purifn. of enzymes. Maltase was purified on a maltose-contg. affinity column.

IT Enzymes
RL: BIOL (Biological study)
(**DNA**-cleaving, affinity purifn. of, with plastic-immobilized **nucleotides** or oligonucleotides)

IT **Nucleotides**, biological studies
RL: BIOL (Biological study)
(plastic-immobilized, for affinity purifn. of **DNA**-cleaving enzymes)

IT **Nucleotides, polymers**
RL: BIOL (Biological study)
(oligo-, plastic-immobilized, for affinity purifn. of **DNA** -cleaving enzymes)

IT 79-06-1, 2-Propenamide, analysis 79-10-7, Acrylic acid, analysis 79-41-4, Methacrylic acid, analysis 88-12-0, analysis 108-05-4, Vinylacetate, analysis 818-61-1 868-77-9, Hydroxyethylmethacrylate 21982-30-9, Hydroxymethylmethacrylate
RL: ANST (Analytical study)
(**polymers** contg., epoxy derivs. of, ligand immobilization on, for affinity chromatog. of enzymes)

IT **106-90-1**, 2,3-Epoxypropylacrylate 106-91-2, 2,3-Epoxypropylmethacrylate
RL: RCT (Reactant)
(reaction of, with hydroxyl-group-contg. plastic, in prepn. of epoxy-plastic deriv., affinity chromatog. of enzymes in relation to)

L8 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1987:428308 CAPLUS
DN 107:28308

TI Cellular distribution in rat liver of intravenously administered polyacryl starch and chondroitin sulfate microparticles
AU Laakso, Timo; Smedsrod, Baard
CS Dep. Drugs, Natl. Board Health Welfare, Uppsala, Swed.
SO Int. J. Pharm. (1987), 36(2-3), 253-62
CODEN: IJPHDE; ISSN: 0378-5173
DT Journal
LA English
AB The interaction of polyacryl starch and chondroitin sulfate (CS) microparticles with rat liver cells was studied in vivo and in cell cultures. Kupffer cells (KC) in culture avidly engulfed both starch and CS particles. Cultured liver endothelial cells (LEC) bound CS, and to a lesser degree starch particles. Parenchymal cells (PC) in culture did not bind any of the particles. I.v. injection of either type of particles labeled with fluorescein isothiocyanate, and subsequent isolation of the liver cells showed uptake only in KC. After i.v. administration of 14C-labeled particles, radioactivity was accumulated mainly in KC. Thus, polysaccharide microparticles in the micron range may be suitable for **targeting** drugs to KC.
AB The interaction of polyacryl starch and chondroitin sulfate (CS) microparticles with rat liver cells was studied in vivo and in cell cultures. Kupffer cells (KC) in culture avidly engulfed both starch and CS particles. Cultured liver endothelial cells (LEC) bound CS, and to a lesser degree starch particles. Parenchymal cells (PC) in culture did not bind any of the particles. I.v. injection of either type of particles labeled with fluorescein isothiocyanate, and subsequent isolation of the liver cells showed uptake only in KC. After i.v. administration of 14C-labeled particles, radioactivity was accumulated mainly in KC. Thus, polysaccharide microparticles in the micron range may be suitable for **targeting** drugs to KC.
IT 9007-28-7DP, Chondroitin sulfate, acryloylated, **polymers**
9050-36-6DP, Maltodextrin, acryloylated, **polymers**
RL: SPN (Synthetic preparation); PREP (Preparation)
(microspheres, prepn. and cellular distribution in liver of)
IT **106-90-1**, Glycidylacrylate
RL: RCT (Reactant)
(reaction of, with chondroitin sulfate or maltodextrin)

L8 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1986:494129 CAPLUS
DN 105:94129
TI Modified polypeptide supports
IN Hou, Kenneth C.; Liao, Tung Ping D.
PA AMF Inc., USA
SO Eur. Pat. Appl., 80 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 7

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 172580	A2	19860226	EP 1985-110573	19850822
	EP 172580	A3	19861230		
	EP 172580	B1	19901114		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	JP 61141719	A2	19860628	JP 1985-178489	19850813
	AT 58306	E	19901115	AT 1985-110573	19850822
	US 4687820	A	19870818	US 1986-857513	19860422
PRAI	US 1984-643212		19840822		
	US 1983-466114		19830214		
	US 1984-576448		19840202		
	EP 1985-110573		19850822		

AB A modified polypeptide material useful as a chromatog. support for ion exchange chromatog., affinity chromatog., or reversed-phase chromatog. or as a reagent for biochem. reactors comprises an insol. polypeptide carrier and a synthetic **polymer**, the synthetic **polymer** made from (a) a **polymerizable** compd. which has a chem. group capable of covalent coupling to the insol. polypeptide carrier and (b) one or more **polymerizable** compds. contg. an ionizable chem. group, a chem. group capable of transformation to an ionizable chem. group, a group capable of causing the covalent coupling of the synthetic **polymer** to an affinity ligand or a biol. active mol., or a hydrophobic chem. group. The synthetic **polymer** is covalently bonded to the insol. polypeptide carrier. For example, fiberized wook was mixed with the surfactant Siponic LAE-612 in a reactor; diethylaminoethyl methacrylate and glycidyl methacrylate were added, followed by aq. solns. of (NH4)2S2O8 and Na2S2O3 to yield a DEAEMA-GMA copolymer wool substrate. The binding capacity of the modified wool for bovine serum albumin was 1250 mg/g. This modified polypeptide material provides excellent swellability while maintaining the rigidity and structure required for a good exchange. This chromatog. sepn. medium is particularly useful in blood filtration and purifn. of various blood fractions.

AB A modified polypeptide material useful as a chromatog. support for ion exchange chromatog., affinity chromatog., or reversed-phase chromatog. or as a reagent for biochem. reactors comprises an insol. polypeptide carrier and a synthetic **polymer**, the synthetic **polymer** made from (a) a **polymerizable** compd. which has a chem. group capable of covalent coupling to the insol. polypeptide carrier and (b) one or more **polymerizable** compds. contg. an ionizable chem. group, a chem. group capable of transformation to an ionizable chem. group, a group capable of causing the covalent coupling of the synthetic **polymer** to an affinity ligand or a biol. active mol., or a hydrophobic chem. group. The synthetic **polymer** is covalently bonded to the insol. polypeptide carrier. For example, fiberized wook was mixed with the surfactant Siponic LAE-612 in a reactor; diethylaminoethyl methacrylate and glycidyl methacrylate were added, followed by aq. solns. of (NH4)2S2O8 and Na2S2O3 to yield a DEAEMA-GMA copolymer wool substrate. The binding capacity of the modified wool for bovine serum albumin was 1250 mg/g. This modified polypeptide material provides excellent swellability while maintaining the rigidity and structure required for a good exchange. This chromatog. sepn. medium is particularly useful in blood filtration and purifn. of various blood fractions.

ST polypeptide **polymer** conjugate chromatog support; wool methacrylate conjugate chromatog support

IT Albumins, blood serum
RL: PROC (Process)
(binding of, by **polymer**-protein conjugates)

IT Agglutinins and Lectins
Ligands
Nucleic acids
Carbohydrates and Sugars, uses and miscellaneous
RL: ANST (Analytical study)
(immobilized, on **polymer**-protein conjugate, for affinity chromatog.)

IT Proteins
RL: ANST (Analytical study)
(**polymer** derivs. as stationary phases for chromatog.)

IT Wool
Keratins
RL: ANST (Analytical study)
(**polymer** derivs., as stationary phases for chromatog.)

IT Ion exchangers
(**polymer**-protein conjugates)

IT **Polymers**, compounds

RL: ANST (Analytical study)
(protein derivs., as stationary phases for chromatog.)

IT Blood
(purifn. of, **polymer**-protein conjugates for)

IT Chromatography, column and liquid
(affinity, stationary phases for, **polymer**-protein conjugates as)

IT Antibodies
Antigens
Enzymes
RL: ANST (Analytical study)
(immobilized, on **polymer**-protein conjugate, for affinity chromatog.)

IT Chromatography, column and liquid
(ion-exchange, stationary phases for, **polymer**-protein conjugates as)

IT 105-16-8D, **polymers**, protein derivs. **106-90-1D**, **polymers**, protein derivs. 106-91-2D, **polymers**, protein derivs. 2426-54-2D, **polymers**, protein derivs. 2439-35-2D, **polymers**, protein derivs. 38742-80-2D, protein derivs. 103902-08-5D, protein derivs. 103902-09-6D, protein derivs. 103902-10-9D, protein derivs.
RL: ANST (Analytical study)
(as stationary phases for chromatog.)

L8 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1985:84348 CAPLUS
DN 102:84348
TI Characterization of polyacryl starch microparticles as carriers for proteins and drugs
AU Artursson, Per; Edman, Peter; Laakso, Timo; Sjoeholm, Ingvar
CS Dep. Drugs, Natl. Board Health Welfare, Uppsala, S-751 25, Swed.
SO J. Pharm. Sci. (1984), 73(11), 1507-13
CODEN: JPMSAE; ISSN: 0022-3549
DT Journal
LA English
AB Biodegradable microparticles of crosslinked hydroxyethyl starch [9005-27-0] or maltodextrin [9050-36-6] were designed as carriers of proteins and low mol. wt. drugs in vivo. The synthesis of acryloyloxyhydroxypropyl derivs. of the polysaccharides and their polymn. to microparticles are described. The polysaccharides were immobilized in the microparticles in high yields, i.e., up to 40% of the dry wt. consisted of the immobilized protein. The optimal conditions of immobilization were investigated by varying the concn. of polysaccharides, the concn. of acryloyl groups, and the amt. of addnl. crosslinking agent. Exclusion of the crosslinking agent gave maximal immobilization of the macromols. Enzyme kinetics, release profiles, surface localization, and heat stability of the immobilized macromols. are also presented. Microparticles based on starch with small amts. of acryloyl groups were completely degraded after incubation with amyloglucosidase. The degrdn. of microparticles in serum and in the **target** organelle, the lysosome, was investigated in vitro. The polyacrylic starch microspheres (mean diam., 0.5 .mu.M) constitute an attractive alternative to other drug and enzyme carriers.
AB Biodegradable microparticles of crosslinked hydroxyethyl starch [9005-27-0] or maltodextrin [9050-36-6] were designed as carriers of proteins and low mol. wt. drugs in vivo. The synthesis of acryloyloxyhydroxypropyl derivs. of the polysaccharides and their polymn. to microparticles are described. The polysaccharides were immobilized in the microparticles in high yields, i.e., up to 40% of the dry wt. consisted of the immobilized protein. The optimal conditions of immobilization were investigated by varying the concn. of polysaccharides,

L10 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
AN 1989:408004 CAPLUS
DN 111:8004
TI Unsaturated **aryl ketones** and use of their polymers as photoinitiators
IN Hatton, Kevin Brian; Irving, Edward; Walshe, Josephine Mary Angela; Mallaband, Anne
PA Ciba-Geigy A.-G., Switz.
SO Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 302831	A2	19890208	EP 1988-810527	19880729
	EP 302831	A3	19900110		
	EP 302831	B1	19930512		
	R: BE, CH, DE, FR, GB, IT, LI, NL, SE				
	CA 1304739	A1	19920707	CA 1988-573674	19880803
	JP 01070440	A2	19890315	JP 1988-195952	19880805
	JP 2860549	B2	19990224		
	US 4977293	A	19901211	US 1990-465513	19900116
	US 5100987	A	19920331	US 1990-603092	19901025
PRAI	GB 1987-18496		19870805		
	GB 1988-12386		19880525		
	US 1988-224624		19880727		
	US 1990-465513		19900116		

AB The title ketones comprise Ar1COCR1R2R3 (I; R1 = C1-10 alkyl or alkoxy; R2 = C1-10 alkyl or an olefinically unsatd. group; R3 = C6-20 aryl, OH, tertiary amine, or an olefinically unsatd. group; Ar1 = C6-20 aryl; .gtoreq.1 of R2,R3, and Ar1 contains an olefinically unsatd. group). Glycidyl acrylate (8.58 g) was added dropwise over 30 min to a soln. of 1-oxo-2-methoxy-2-(2-carboxyethyl)-1,2-diphenylethane 10.0, BHT 0.2, and 5% Cr(III) trisoctanoate in ligroin 0.2 in PhMe 150 g heated to 110.degree., heated 6 h at 110.degree., then stripped of PhMe, giving I (R1 = OMe; R2 = CH2CH2CO2CH2CH(OH)CH2OCOCH:CH2; R3, Ar1 = Ph) (II). A mixt. of Me methacrylate 60.0, Bu methacrylate 25.5, 2-(dimethylamino)ethyl methacrylate 8.0, II 6.5, and AIBN 1.35 g was added dropwise over 4 h to 67 g butoxyethanol heated to 80.degree., heated to 80.degree. for 20 min, mixed with 0.15 g AIBN and heated at 80.degree. for 30 min, giving polymer with no.-av. mol. wt. 13636 and wt.-av. mol. wt. 288859.

TI Unsaturated **aryl ketones** and use of their polymers as photoinitiators
ST unsatd **aryl ketone** polymer photoinitiator
IT **Ketones**, preparation
RL: RCT (Reactant); PREP (Preparation)
(**aryl**, unsatd., prepn. and polymn. of, for photoinitiators)
IT **Ketones**, polymers
RL: PREP (Preparation)
(**aryl**, unsatd., polymers, prepn. of, as photoinitiators)
IT **106-90-1**, Glycidyl acrylate 30674-80-7
RL: RCT (Reactant)
(reaction of, with arom. ketones)

L10 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS
AN 1983:181225 CAPLUS
DN 98:181225
TI Amorphous aromatic polyester modified with amine and a UV-curable composition containing it

IN Pacifici, James G.; Newland, Gordon C.; Moore, Howard G.
PA Eastman Kodak Co., USA
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4374716	A	19830222	US 1981-290460	19810806
	US 4395539	A	19830726	US 1982-401756	19820726
PRAI	US 1981-290460		19810806		

AB The title polyesters are prepd. from terephthalic acid, 1,2-propanediol, and an amine-contg. glycol. They are useful as crosslinking resins and as a component of the photoinitiation system for UV-curable coating and ink compns. Thus, a mixt. of di-Me terephthalate 97.1, Ethomeen 18/25 74.7, and 1,2-propanediol 152.2 g contg. 1.55 mL Zn(OAc)2 in BuOH and 0.2 mL (iso-PrO)4Ti in BuOH was heated at 200-210.degree. for 7 h and at 230.degree. and 0.1-mm pressure for 25 min to give a polyester [85548-33-0] having inherent viscosity (0.5 g/100 mL in 60:40 PhOH-C2H2Cl4, 25.degree.) 0.125 dL/g. The polyester compn. was dissolved in a 1:1 mixt. of hydroxypropyl acrylate and neopentyl glycol diacrylate at a concn. of 30 g/100 mL, mixed with 3 wt.% benzophenone, and coated (2-nil thick) on a panel. The cured coating showed excellent resistance to acetone, and had a smooth, hard surface.

IT **Ketones**, uses and miscellaneous
RL: USES (Uses)
(**aryl**, photoinitiators, for crosslinking of amine-contg. polyesters)

IT 80-62-6 96-33-3 97-63-2 **106-90-1** 106-91-2 140-88-5
2223-82-7 2495-35-4 25584-83-2
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agents, for photocurable amine-contg. polyesters)

=>

L12 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2002 ACS
AN 1972:421750 CAPLUS
DN 77:21750
TI Crosslinking **polymers**
IN D'Alelio, Gaetano F.
SO U.S., 6 pp. Continuation-in-part of U.S. 3,530,100 (CA 73;121267h).
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3654240	A	19720404	US 1968-778849	19681125

AB Crosslinked acrylate **polymers** were prepd. by treating acrylic acids or anhydrides with a linear propylene oxide **polymer**, and treating the product with carboxylic acids, chlorides, or isocyanates. The linear epoxide-contg. **polymer** could also be treated with oleic, lineolic, and linolenic acid to yield **polymers** contg. an unsatd. fatty ester, which could be exposed to O and converted to insol., infusible products. Thus, 45 parts glycidyl acrylate [**106-90-1**] and 55 parts MeCOEt under N was treated with 0.5 part **azobisisobutyronitrile** at 75-80.deg. for 2 hr to form an epoxy-contg. homopolymer, which was treated (127 parts) with 282.5 parts oleic acid [112-80-1] at 180.deg. to form the crosslinkable **polymer** (I). Films cast from a 35% I soln. in toluene contg. 0.05% metallic naphthenate drier were insol. in toluene, acetone, and hexane.

L12 ANSWER 22 OF 26 CAPLUS COPYRIGHT 2002 ACS
AN 1974:492216 CAPLUS
DN 81:92216
TI Hydrophilic **polymer**
IN Nakanishi, Toshio
PA Matsushita Electric Works, Ltd.
SO Japan., 3 pp.
CODEN: JAXXAD
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 48036191	B4	19731101	JP 1970-973	19691228

AB Glycidyl methacrylate (I) [106-91-2] or glycidyl acrylate [**106-90-1**] is treated with glucosamine (II) [3416-24-8], glucamine [488-43-7] or trimethylolaminomethane [77-86-1] to give a hydrophilic compd. which is homopolymd. or copolymd. in the presence of Bz2O2 or **azobisisobutyronitrile** as catalyst, giving a hydrophilic **polymer**. Thus, 312 g I was treated with 179 g II in 300 ml AcNMe2 at 80.deg. for 5 hr under N to give a divinyl compd. [52017-92-2], which (4.63 g) was mixed with 0.484 g Bz2O2 and the mixt. was cast polymd. 10 hr at 80.deg., giving a colorless transparent **polymer** [52017-98-8] with moisture absorption 42% (ASTM D-570).

the concn. of acryloyl groups, and the amt. of addnl. crosslinking agent. Exclusion of the crosslinking agent gave maximal immobilization of the macromols. Enzyme kinetics, release profiles, surface localization, and heat stability of the immobilized macromols. are also presented. Microparticles based on starch with small amts. of acryloyl groups were completely degraded after incubation with amyloglucosidase. The degrdn. of microparticles in serum and in the **target** organelle, the lysosome, was investigated in vitro. The polyacrylic starch microspheres (mean diam., 0.5 .mu.M) constitute an attractive alternative to other drug and enzyme carriers.

ST polyacryl starch microparticle carrier drug; protein carrier polyacryl starch; hydroxyethyl starch **polymer** microparticle; maltodextrin **polymer** microparticle

IT **106-90-1**
RL: RCT (Reactant)
(reaction of, with hydroxyethyl starch or maltodextrin)

L8 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1983:2491 CAPLUS
DN 98:2491
TI Three-dimensional carrier of an inorganic porous material-reactive **polymer**
IN Kalal, Jaroslav; Tlustakova, Marie
PA Ceskoslovenska Akademie Ved , Czech.
SO U.S., 7 pp. cont.-in-part of U.S. Ser. No. 847,259, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4332694	A	19820601	US 1979-98343	19791129
	CS 187785	B	19790228	CS 1976-7319	19761112
	CS 187786	B	19790228	CS 1976-7320	19761112
PRAI	CS 1976-7319		19761112		
	CS 1976-7320		19761112		
	US 1977-847259		19771031		

AB Three-dimensional carriers consisting of inorg. porous materials (e.g., glass, silica gel, asbestos) and 0.001-95% of nonextractable sorbed reactive **polymers** contg. epoxy groups are prepd. for use in immobilizing biol. active compds., e.g., enzymes, as well as dyes, complex-forming compds., and other compds. The carriers may be prepd. either by coating the inorg. material with a monomer, which then is polymd., or by depositing a soln. of a prepd. **polymer** (d.p. <103) on the inorg. material. The compds. to be immobilized may be bonded either directly, through the epoxy groups of the **polymers**, or the epoxy groups may be replaced with other reactive groups. Thus, a soln. of 2,3-epoxypropyl methacrylate was deposited on controlled-pore glass by distn. in vacuo, and .alpha.,.alpha.'-azobis[isobutyronitrile] was added to the suspension to initiate polymn. of the monomer. A carrier prepd. in this way, contg. poly(2,3-epoxypropyl methacrylate), then was treated with a soln. of chymotrypsin at 4.degree. for 60 h to immobilize the enzyme.

TI Three-dimensional carrier of an inorganic porous material-reactive **polymer**

AB Three-dimensional carriers consisting of inorg. porous materials (e.g., glass, silica gel, asbestos) and 0.001-95% of nonextractable sorbed reactive **polymers** contg. epoxy groups are prepd. for use in immobilizing biol. active compds., e.g., enzymes, as well as dyes, complex-forming compds., and other compds. The carriers may be prepd. either by coating the inorg. material with a monomer, which then is polymd., or by depositing a soln. of a prepd. **polymer** (d.p.

<103) on the inorg. material. The compds. to be immobilized may be bonded either directly, through the epoxy groups of the **polymers**, or the epoxy groups may be replaced with other reactive groups. Thus, a soln. of 2,3-epoxypropyl methacrylate was deposited on controlled-pore glass by distn. in vacuo, and .alpha.,.alpha.'-azobis[isobutyronitrile] was added to the suspension to initiate polymn. of the monomer. A carrier prepd. in this way, contg. poly(2,3-epoxypropyl methacrylate), then was treated with a soln. of chymotrypsin at 4.degree. for 60 h to immobilize the enzyme.

ST carrier biol compd immobilization; enzyme immobilization carrier; **polymer** carrier enzyme immobilization; glass carrier enzyme immobilization; asbestos carrier enzyme immobilization; silica gel carrier enzyme immobilization

IT Dyes
Chemical compounds
Enzymes
RL: PROC (Process)
(immobilization of, on inorg. material-**polymer** compn. carriers)

IT Carriers
(inorg. material-**polymer** compns. as, for immobilization of biol. compds.)

IT Chemical compounds
RL: PROC (Process)
(biol., immobilization of, on inorg. material-**polymer** compn. carriers)

IT 110-86-1D, **nucleotides** 9000-92-4 9001-05-2 9001-08-5
9001-15-4 9001-33-6 9001-34-7 9001-37-0 9001-42-7 9001-57-4
9001-60-9 9001-73-4 9001-75-6 9001-78-9 9001-92-7 9001-99-4
9002-01-1 9002-07-7 9002-10-2 9002-13-5 9004-07-3 9012-54-8
9012-56-0 9014-06-6 9027-41-2 9027-68-3 9028-86-8 9031-44-1
9031-55-4 9031-98-5 9032-08-0 9032-75-1 9032-92-2 9035-73-8
9035-82-9 9067-84-9 55576-43-7
RL: PROC (Process)
(immobilization of, on inorg. material-**polymer** compn. carriers)

IT **106-90-1** 106-91-2 106-92-3 123-36-4 930-22-3 3678-15-7
3814-58-2 6790-37-0 6790-38-1 10353-53-4 19900-48-2 23584-01-2
25067-05-4 26374-91-4 44605-74-5 45719-86-6 55553-02-1
55750-22-6 61615-02-9 63623-06-3 70235-57-3 71510-07-1
74891-77-3 83201-23-4 83201-24-5 83201-25-6 83201-26-7
83201-29-0 83201-30-3
RL: ANST (Analytical study)
(in carriers prepn., for immobilization of biol. compds.)

IT 75-44-5 106-50-3, biological studies 3638-04-8 13444-71-8
107-15-3, biological studies 109-63-7 121-44-8, biological studies
124-09-4, biological studies 371-34-6 463-71-8 7664-41-7, biological studies 7664-93-9, biological studies 7803-57-8
RL: ANST (Analytical study)
(inorg. material-**polymer** compn. carrier modification by, for immobilization of biol. compds.)

L8 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1982:468553 CAPLUS
DN 97:68553
TI **Polymers** of cofactors containing an adenine nucleus and **polymers** with an increased grafting rate, presenting biological activity
IN Le Goffic, Francois; Sicsic, Sames; Vincent, Christian
PA Agence Nationale de Valorisation de la Recherche, Fr.
SO Fr. Demande, 18 pp.
CODEN: FRXXBL

DT Patent
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2454448	A1	19801114	FR 1979-9994	19790420
	FR 2454448	B1	19810814		

AB Adenine cofactors are immobilized by reaction with a **polymerizable** alkylating agent in the presence of ClO4- at slightly acid pH, followed by polymn. and Dimroth rearrangement of the alkylated cofactor. Thus, an aq. soln. of NAD, 40.degree., pH 6.5, was treated every 24 h for a week with a DMF soln. of 2,3-epoxypropyl acrylate. The pH of the soln. was maintained by addn. of HClO4. After 1 wk, 90% of the initial NAD was converted to N1-(acryloxy-2-hydroxypropyl)NAD; the product was recovered by Me2CO pptn. from acidified reaction mixt. and purified by ion-exchange chromatog. Acryloxy-2-hydroxypropyl derivs. of ATP and ADP were prepd. similarly. The alkylated cofactors were polymd. by incubation in alk. phosphate buffer for 5 days at 37.degree. in the presence of Na persulfate and triethylenemethyldiamine. Acrylamide was included in some incubations. Polymd. and nonpolymd. material were sepd. by passage over Biogel P10. The NAD deriv. polymd. without added acrylamide had 81% the activity of free NAD in incubations with alc. dehydrogenase. **Polymers** contg. extra acrylamide were less active. The polymd. cofactor was more active than an equiv. amt. of agarose-immobilized NAD. The ADP and ATP **polymers** were active as kinase cofactors.

TI **Polymers** of cofactors containing an adenine nucleus and **polymers** with an increased grafting rate, presenting biological activity

AB Adenine cofactors are immobilized by reaction with a **polymerizable** alkylating agent in the presence of ClO4- at slightly acid pH, followed by polymn. and Dimroth rearrangement of the alkylated cofactor. Thus, an aq. soln. of NAD, 40.degree., pH 6.5, was treated every 24 h for a week with a DMF soln. of 2,3-epoxypropyl acrylate. The pH of the soln. was maintained by addn. of HClO4. After 1 wk, 90% of the initial NAD was converted to N1-(acryloxy-2-hydroxypropyl)NAD; the product was recovered by Me2CO pptn. from acidified reaction mixt. and purified by ion-exchange chromatog. Acryloxy-2-hydroxypropyl derivs. of ATP and ADP were prepd. similarly. The alkylated cofactors were polymd. by incubation in alk. phosphate buffer for 5 days at 37.degree. in the presence of Na persulfate and triethylenemethyldiamine. Acrylamide was included in some incubations. Polymd. and nonpolymd. material were sepd. by passage over Biogel P10. The NAD deriv. polymd. without added acrylamide had 81% the activity of free NAD in incubations with alc. dehydrogenase. **Polymers** contg. extra acrylamide were less active. The polymd. cofactor was more active than an equiv. amt. of agarose-immobilized NAD. The ADP and ATP **polymers** were active as kinase cofactors.

ST NAD acrylate **polymer** dehydrogenase cofactor; ATP acrylate **polymer** kinase cofactor; ADP acrylate **polymer** kinase cofactor; kinase cofactor adenine **nucleotide** acrylate **polymer**; coenzyme acrylate **polymer**

IT Coenzymes
RL: PREP (Preparation)
(adenine-contg., acrylate **polymer** derivs. of, prepn. and activity of)

IT 9001-15-4 9001-59-6
RL: BIOL (Biological study)
(ADP-acrylate **polymer** as cofactor for)

IT 9001-51-8
RL: BIOL (Biological study)
(ATP-acrylate **polymer** as cofactor for)

IT 9001-60-9 9029-06-5 9031-72-5
RL: BIOL (Biological study)

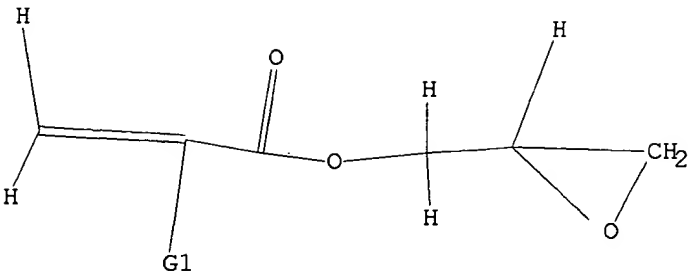
(NAD-acrylate **polymer** as cofactor for)

IT **106-90-1**
RL: RCT (Reactant)
(reaction of, with adenine coenzymes)

L8 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1981:79164 CAPLUS
DN 94:79164
TI A simple, general method for preparation of hydrosoluble **polymeric** adenine **nucleotide** coenzymes
AU Le Goffic, F.; Sicsic, S.; Vincent, C.
CS Cent. Etudes Rech. Chim. Org. Appl., CNRS, Thiais, 94320, Fr.
SO Enzyme Eng. (1980), 5, 127-31
CODEN: ENENDT; ISSN: 0094-8500
DT Journal
LA English
AB A method for the prepn. of water-sol., **polymer**-fixed NAD, ADP, ATP, and CoA is presented. NAD and ADP are alkylated at the N1 position of adenine with acrylic acid 2,3-epoxypropyl ester and polymd.; a Dimroth rearrangement occurs simultaneously with polymn., yielding biol. active **polymers**. The thiol group of CoA must be protected before the first step. The ATP **polymer** cannot be obtained directly because of the hydrolysis of phosphate bonds. The relative initial rates of reaction of free and agarose-immobilized alc. dehydrogenase with NAD homopolymers were 81% and 36%, resp. The relative activity of ADP homopolymers was higher with pyruvate kinase (49%) than with creatine kinase (28%).
TI A simple, general method for preparation of hydrosoluble **polymeric** adenine **nucleotide** coenzymes
AB A method for the prepn. of water-sol., **polymer**-fixed NAD, ADP, ATP, and CoA is presented. NAD and ADP are alkylated at the N1 position of adenine with acrylic acid 2,3-epoxypropyl ester and polymd.; a Dimroth rearrangement occurs simultaneously with polymn., yielding biol. active **polymers**. The thiol group of CoA must be protected before the first step. The ATP **polymer** cannot be obtained directly because of the hydrolysis of phosphate bonds. The relative initial rates of reaction of free and agarose-immobilized alc. dehydrogenase with NAD homopolymers were 81% and 36%, resp. The relative activity of ADP homopolymers was higher with pyruvate kinase (49%) than with creatine kinase (28%).
IT **Polymerization**
(of **nucleotide** coenzymes, with epoxypropyl acrylate, activity in relation to)
IT **106-90-1**
RL: RCT (Reactant)
(polymn. of, with adenine **nucleotide** coenzymes)

=>

L4 STR



G1 H,Me

L14 ANSWER 1 OF 25 CAPLUS COPYRIGHT 2002 ACS
2000:179283 Document No. 132:177713 Synthesis of high-efficiency affinity membrane chromatography medium. Zou, Hanfa; Zhou, Dongmei; Yang, Li; Jia, Lingyun; Zhang, Yukui (Dalian Research Institute of Chemical Physics, Chinese Academy of Sciences, Peop. Rep. China). Faming Zhuanli Shenqing Gongkai Shuomingshu CN 1203363 A 19981230, 8 pp. (Chinese). CODEN: CNXXEV. APPLICATION: CN 1997-111908 19970625.

AB The affinity membrane chromatog. medium is synthesized by allowing glycidyl methacrylate or glycidyl acrylate to self-**polymerize** in the presence of initiator, allowing the **polymer** to graft with wood cellulose to obtain wood cellulose composite membrane, adding imino-oxalic acid to carry out ring-opening reaction, and adding metal ion soln. to obtain metal chelated affinity membrane chromatog. medium. The self-polymn. and grafting reaction are carried out in water at 50-90.degree.; the initiator is **azodiisobutyronitrile**, n-Bu Li, ammonium persulfate, or Na2S2O3. The affinity membrane chromatog. medium with triazine dye as ligand is prepd. by allowing the wood cellulose composite membrane to react with acid (ring-opening reaction), and allowing the treated composite membrane to link with dye. The affinity membrane chromatog. medium with protein as ligand is prepd. by allowing the composite membrane to react with acid (ring-opening reaction), oxidizing with NaIO4, and allowing the treated composite membrane to link with protein.

L14 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2002 ACS
2000:134516 Document No. 132:134350 Synthesis of metal chelated affinity membrane medium for radial chromatographic column. Yang, Li; Jia, Lingyun; Guo, Yufeng; Zou, Hanfa; Zhang, Yukui (Dalian Chemical Physics Institute, Chinese Academy of Sciences, Peop. Rep. China). Faming Zhuanli Shenqing Gongkai Shuomingshu CN 1188681 A 19980729, 6 pp. (Chinese). CODEN: CNXXEV. APPLICATION: CN 1997-105052 19970124.

AB The synthesis process comprises prepg. **polymer** from epoxypropyl methylacrylate or epoxypropyl acrylate by self-polymn., reacting with cellulose (grafting reaction), reacting with iminoacetic acid (ring-opening reaction) at 40-80.degree., and reacting with metal ion (chelation). The self-polymn. and grafting reaction are carried out in water at 50-90.degree.. The initiator used in the synthesis process may be **azodiisobutyronitrile**, (NH4)2S2O6 and Na2S2O3, or n-Bu Li, and its addn. is 1-5% of the monomer. Inorg. salt (such as NaCl, Na2SO4) may be added in the ring-opening reaction as accelerating agent. The metal ion may be Cu2+, Zn2+, Fe3+, or Ni2+.

L14 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2002 ACS
1998:41981 Document No. 128:141501 **Polymerizable** compounds and liquid crystal displays using the same with high contrast, strength, and heat resistance without formation of disclination lines. Onishi, Takeaki; Yamada, Nobuaki; Yoshida, Akihiko; Mizobe, Honami; Suzuki, Kenji (Sharp Corp., Japan; Kanto Chemical Co., Ltd.). Jpn. Kokai Tokkyo Koho JP 10007617 A2 19980113 Heisei, 45 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1997-34165 19970218. PRIORITY: JP 1996-38517 19960226.

AB The title compds. are CH2:C(X)CO2(CH2)l[CH2:C(X)CO2(CH2)m]CH(CH2)nY(CH2)p(O)qRA(RB)gC6H3F2-2,3 (X = H, Me; l, m = 0-14; Y = direct bond, CO2, O2C, O; n, p = 0-18; q, s = 0, 1; RA, RB = benzene ring, cyclohexane ring; when q = 1, p .gtoreq.2; when RA = cyclohexane ring, RB = cyclohexane ring). A liq. crystal cell was formed from isobornyl acrylate 0.65, 1,4-butanediol diacrylate 0.25, p-phenylstyrene 0.15, [CH2:CHCO2(CH2)6]2CHCO2(CH2)11O-p-C6H4C6H3F2-2,3 0.15, MLC-6419 12, and Irgacure 651 0.04 g.

L14 ANSWER 4 OF 25 CAPLUS COPYRIGHT 2002 ACS
1998:5127 Document No. 128:88378 Polyvinylpyridine chloroaluminum borohydride as a new stable, and efficient reducing agent in organic

synthesis. Tamami, Bahman; Lakoraj, Moslem Mansour; Yeganeh, Hamid (Department of Chemistry, Shiraz University, Shiraz, Iran). Iran. Polym. J., 6(3), 159-167 (English) 1997. CODEN: IPJOFF. ISSN: 1026-1265. OTHER SOURCES: CASREACT 128:88378. Publisher: Polymer Research Center of Iran.

AB The unstable chloroaluminum borohydride, Al(BH4)Cl2, is stabilized on poly(vinylpyridine) which is used as an efficient and regenerable **polymer** supported transition-metal borohydride reagent for redn. of variety of org. compds. such as, aldehydes, ketones, acid chlorides, epoxides and **azides**. The reagent is unable to reduce, esters, amides, oximes, and nitro compds.

L14 ANSWER 5 OF 25 CAPLUS COPYRIGHT 2002 ACS

1997:483100 Document No. 127:183336 Radiation-sensitive polyester macromonomer-containing **polymer** composition for manufacture of color filter. Suzuki, Nobuo; Kato, Eiichi (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 09179299 A2 19970711 Heisei, 41 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-333471 19951221.

AB The compn. contg. a radiation-sensitive compd. and a pigment comprises a binder contg. a copolymer [wt.-av. mol. wt. (M) 5 .times. 104-1 .times. 104 (sic)] manufd. from .gtoreq.1 polyester macromonomer with M 1 .times. 103-1 .times. 104 selected from f1HC:C(f2)X1Y1CO2(W1OCOW2CO2)nR61 and f3HC:C(f4)X2Y2CO2(W3CO2)nR62 [f1-2 = H, halo, cyano, C1-8 hydrocarbyl, CO2T1, C1-8 hydrocarbyl-contg. CO2T2; T1-2 = C1-18 hydrocarbyl; X1 = none, CO2, OCO, (CH2)xCO2, (CH2)xOCO, CONd1, CONHCONH, CONHCO2, O, C6H4, SO2; W1-2 = divalent aliph. or arom. group; R61 = H, hydrocarbyl; d1 = H, C1-12 hydrocarbyl]. The compn. showed good pigment dispersibility and coatability.

L14 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2002 ACS

1994:165042 Document No. 120:165042 Synthesis of liquid crystalline **polymers** with side chains. Yang, Chuncai; Zhao, Donghui; Tang, Xinyi; Feng, Guizen; Zhao, Xiaoguang; Zhou, Enle (Dep. Chem., Jilin Univ., Changchun, 130023, Peop. Rep. China). Chem. Res. Chin. Univ., 9(2), 143-7 (English) 1993. CODEN: CRCUED.

AB Liq.-cryst. 2-hydroxy-3-[[3-[[2-[p-(p-nitrophenylazo)phenoxy]ethoxy]carbonyl]propanoyl]oxy]propyl acrylate **polymer** was prepd. and characterized by IR and NMR spectroscopy, DSC and optical microscopy.

L14 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2002 ACS

1991:633142 Document No. 115:233142 Naphthylbenzotriazole UV light absorbers for plastics. Rasoul, Firas A.; Shuhaibar, Khamis (Kuwait Institute for Scientific Research, Kuwait). Brit. UK Pat. Appl. GB 2237567 A1 19910508, 28 pp. (English). CODEN: BAXXDU. APPLICATION: GB 1989-23919 19891024.

AB **Polymerizable** I (R = H, halogen, or alkoxy; R1 = H, alkyl, optionally substituted with .gtoreq.1 lower alkenyloxy and/or .beta.-hydroxy groups, or alkenyl or alkenoyl group) light stabilizers with fluorescent properties for plastics are prepd. Reaction of 1.10 parts acryloyl chloride in 40 parts CCl4 with 3.0 parts 2-(2,7-dihydroxynaphthyl)-2H-benzotriazole, prepd. by **azotization** of nitroaniline **diazonium** salt and 2,7-dihydroxynaphthalene, in 100 parts H2O contg. 0.8 parts NaOH gave 2-(2-hydroxy-7-acryloxynaphthyl)-2H-benzotriazole (II) (m.p. 140-141.degree.) and extinction coeff. 0.86 .times. 104 l mol-1 cm-1 at 274.5 nm. II was polymd. in PhMe at 60.degree. for 120 h using AIBN to give a homopolymer having inherent viscosity (0.5% in CCl4 25.degree.) 1.94 dL/g.

L14 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2002 ACS

1991:570846 Document No. 115:170846 Electrophotographic light-sensitive material. Kato, Eiichi; Ishii, Kazuo (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 405499 A2 19910102, 117 pp. DESIGNATED STATES: R: DE, GB. (English). CODEN: EPXXDW. APPLICATION: EP 1990-112250 19900627. PRIORITY: JP 1989-163796 19890628; JP 1989-212994 19890821.

AB In the title material contg. an inorg. photoconductive substance and a binder resin, the binder resin comprises 2 components: (1) .gtoreq.1 resin having a wt. av. mol. wt. (Mw 103-2 .times. 104 and contg. .gtoreq.30 % of copolymerizable component CH(a1):C(a2)(CO2R1) [a1,a2 = H, halogen, CN, hydrocarbon; R1 = hydrocarbon] and 0.5-20 % of a copolymerizable component having .gtoreq.1 acidic group from PO3H2, SO3H, CO2H, OH, P(:O)(OH)R [R = hydrocarbon, OR2 (R2 = R)], and a cyclic acid anhydride-contg. group; and (2) .gtoreq.1 copolymer having a Mw = 3 .times. 104-106, and contg. .gtoreq.1 polyester type macromonomer having a Mw = 103-1.5 .times. 104 and represented by several vinyl-type specific formulas. The material exhibits excellent electrostatic characteristics and mech. strength even under severe conditions. It is advantageously employed in semiconductor laser-scanning exposure systems.

L14 ANSWER 9 OF 25 CAPLUS COPYRIGHT 2002 ACS

1991:502789 Document No. 115:102789 Electrophotographic light-sensitive material. Kato, Eiichi; Ishii, Kazuo (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 407936 A2 19910116, 121 pp. DESIGNATED STATES: R: DE, GB. (English). CODEN: EPXXDW. APPLICATION: EP 1990-113077 19900709. PRIORITY: JP 1989-175730 19890710; JP 1989-212397 19890818.

AB In the title material contg. a photoconductive substance and a binder resin, the binder resin comprises 2 components: (1) .gtoreq.1 resin having a wt. av. mol. wt. (Mw 103-2 .times. 104 and contg. .gtoreq.30 wt.% of copolymerizable component CH(a1):C(a2)(CO2R1) [a1,a2 = H, halogen, CN, hydrocarbon; R1 = hydrocarbon] and having .gtoreq.1 acidic group from PO3H2, SO3H, CO2H, OH, P(:O)(OH)R [R = hydrocarbon, OR2 (R2 = R)], and a cyclic acid anhydride-contg. group at 1 of the terminals of the main chain; and (2) .gtoreq.1 copolymer having a Mw = 3 .times. 104-106, and contg. .gtoreq.1 polyester type macromonomer having a Mw = 103-1.5 .times. 104 and represented by several vinyl-type specific formulas. The material exhibits excellent electrostatic characteristics and mech. strength even under severe conditions. It is advantageously employed in semiconductor laser-scanning exposure systems.

L14 ANSWER 10 OF 25 CAPLUS COPYRIGHT 2002 ACS

1991:192643 Document No. 114:192643 Manufacture of dentures with **polymers**. Hasegawa, Akira; Nakamura, Yuji; Ikeda, Ikuo (G-C Toshi Kogyo Corp., Japan). Ger. Offen. DE 3943188 A1 19900705, 30 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1989-3943188 19891228. PRIORITY: JP 1988-329167 19881228.

AB An artificial tooth consists of a dentin part and a dental enamel part. The enamel part is made of a Ph-free **polymer** with urethane bonds, having .gtoreq.2 ethylenically-unsatd. double bonds. The dentin part is a methacrylic or similar **polymer**. The dentin part is 1st prepolymd., coated with the unpolymd. enamel part, and subsequently both parts are polymd. A dentin comprising poly(Me methacrylate) 65, Me methacrylate 25, ethylene glycol dimethacrylate 5, and filler 5 parts was pressed into a mold and heated at 60.degree. for 30 min. The dentin core was coated with an enamel consisting of a mixt. of 7,7,9-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,6-diol dimethacrylate 50, **azobisisobutyronitrile** 0.5, .gamma.-methacryloxypropyltrimethoxysi lane 0.5, and filler 25 parts. The product was pressed at 500 kg/cm2 and heated at 100.degree. for 15 min.

L14 ANSWER 11 OF 25 CAPLUS COPYRIGHT 2002 ACS

1989:179503 Document No. 110:179503 Process for the preparation of nonthrombogenic materials containing polysaccharides from endothelial cell surfaces. Baumann, Hanno; Keller, Ruprecht (Fed. Rep. Ger.). Ger. Offen. DE 3639561 A1 19880601, 10 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1986-3639561 19861120.

AB A process for the manuf. of a nonthrombogenic prosthesis material for membranes or organ parts, for cannulas, syringes, tubes, or blood

containers is described. A specific endothelial cell-surface proteopolysaccharide (I) contains 4 polysaccharide chains with mol. wt. 35,000 and a central core protein with mol. wt. 55,000; I has no biol. activity otherwise obsd. with glycosaminoglycans, such as heparin or heparin sulfate and it does not interact with the blood coagulation factors. I can be linked to **polymers** and surfaces contg. biopolymers, synthetic **polymers**, or their derivs. Bovine aortas were incubated with 0.1% bovine pancreas trypsin in 1 mM EDTA/PBS, the resulting suspension was centrifuged, and the cells thus obtained were suspended in an endothelial cell medium and incubated. These cells were dissolved in 1 nM EDTA in PBS, sonicated, homogenized and centrifuged and the supernatant was chromatographed on cellulose CL-6B. Silicone contg. free OH (1 g) was placed in a soln. contg. 18 mL H2O, 2 mL 10% vol./vol. (aminopropyl)triethoxysilane at pH 3-4 and heated to 75.degree. for 2 h, washed, and dried. This amino group-contg. silicone (1 g) was placed in an aq. 2.5% soln. of glutaraldehyde and 0.05M phosphate at pH 7.0 for 60 min and it was then treated with a 1% soln. contg. I for 2-4 h, and subsequently it was washed 6M urea.

L14 ANSWER 12 OF 25 CAPLUS COPYRIGHT 2002 ACS

1986:543675 Document No. 105:143675 Formation of relief images. Tani, Hideki; Yabe, Norio (Sanyo-Kokusaku Pulp Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 61058792 A2 19860326 Showa, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1984-180319 19840831.

AB Formation of relief images involves ink-jet recording with an aq. ink on a photosensitive **polymer** layer, irradn. by light to cure the nonimage areas, and washing with water to remove the uncured areas (drawn with ink) to obtain a neg. relief image. The method utilizing the slower curing rate of the parts applied with the ink constitutes a new and simple method of relief image formation. Thus, a PET film was coated with a compn. contg. 10 parts acrylonitrile-vinylidene chloride copolymer and 5 parts Cl3CCO2H to form a 0.5-g/m2 anchor layer. A recording compn. contg. 35:65 acrylamide-diacetonacrylamide copolymer 5, poly(N-vinylpyrrolidone) 5, a water-sol. p-**diazodiphenylamine**-HCHO condensate 0.8 part, and solvents was then coated to form a 5-g/m2 layer. After ink-jet recording with a color ink, the material was exposed to UV for 10 s and washed with a water jet to obtain a relief image, which was dyed black by immersion in a dye soln. The dots produced by the ink-jet recording showed well-defined circular shape. The dyed material was used as a neg. transparency for an overhead projector.

L14 ANSWER 13 OF 25 CAPLUS COPYRIGHT 2002 ACS

1985:168363 Document No. 102:168363 Water-thinned dispersants for pigments. (Kansai Paint Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 59227940 A2 19841221 Showa, 16 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1983-101760 19830609.

AB The title dispersants contain water-solubilized copolymers of fatty acid-modified (meth)acrylic monomer 3-98, N-heterocyclic monomer 2-97, .alpha.,.beta.-ethylenically unsatd. carboxylic acid 0-20, and other .alpha.-.beta.-ethylenically unsatd. monomer 0-91 parts. Thus, safflower oil fatty acid 236, glycidyl methacrylate 119, hydroquinone 0.4, and Et4NBr 0.2 part were heated at 140-50.degree. for 4 h, and the modified monomer 113, N-vinylpyrrolidone 126, acrylic acid 11, and **azobis** (dimethylvaleronitrile) 17.5 parts were added over 2 h to 350 parts Bu cellosolve at 120.degree., heated at 120.degree. for 1 h, treated with 2.5 parts AIBN, heated at 120.degree. for 2 h, treated with 2.5 parts AIBN, heated at 120.degree. for 2 h, concd. to 70.1% solids content, neutralized with Et3N, and dild. with water to give a 40%-solids dispersant. The dispersant (8.3 parts) was mixed with 200 parts TiO2 for 30 min to give a pigment dispersion which (10 parts) was mixed with 23.4 parts 40%-solids Et3N-neutralized alkyd (903:705:1140:610:45 linseed oil fatty acid-pentaerythritol-benzoic acid-isophthalic acid-maleic anhydride) and 1

phr Co drier, coated on a mild steel panel, and dried at 20.degree. and 75% relative humidity for 3 days to give a 36.mu. coating with gloss 98%, pencil hardness B, and excellent adhesion, and water resistance.

L14 ANSWER 14 OF 25 CAPLUS COPYRIGHT 2002 ACS
1984:211594 Document No. 100:211594 Water and oil repellents. (Nippon Mektron K. K., Japan). Jpn. Kokai Tokkyo Koho JP 58164672 A2 19830929 Showa, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1982-46566 19820324.
AB The title repellents contain a **polymer** having pendant poly(oxyperfluoropropylene) groups in the side chain. The repellents have excellent repellency and wash-resistance without damaging the color tone and hand of textiles. Thus, deionized water (50-60.degree.) 220, trimethyloctadecylammonium chloride 15, a mixt. of H2C:CHCO2CH2CF(CF3)[OCF2CF(CF3)]nOCF2CF2CF3 (n = 0 and 1) 100, 2-hydroxyethyl acrylate 0.5, N-methylolacrylamide 0.5 and acetone 100 parts were copolymd. by adding **azodiisobutylamidine** hydrochloride [15453-05-1] 0.05 part; the aq. latex soln. obtained was used to impregnate a cotton cloth for 5 min. The cloth showed excellent water- and oil-repellency.

L14 ANSWER 15 OF 25 CAPLUS COPYRIGHT 2002 ACS
1983:596022 Document No. 99:196022 Acrylic **polymer** hydrogels. (Toa Gosei Chemical Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 58079006 A2 19830512 Showa, 4 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1981-176502 19811105.
AB Transparent hydrogel is prepd. by treating an aq. soln. of acrylic acid-based **polymer** partial salt with epoxy group-contg. unsatd. compds. Thus, poly(acrylic acid) [9003-01-4] (mol. wt. 200,000) and poly(Na acrylate) [25549-84-2] (mol. wt. 350,000) were dissolved in H2O to form a 15% solids soln. of **polymer** with 60 mol % (based on monomer units) salt. A mixt. of the above soln. 100, glycidyl methacrylate [106-91-2] 0.5, and 1% aq. 2,2'-**azobis** (2-amidinopropane)-HCl soln. 1 part was placed in a mold and warmed 2 h at 60.degree. to give a soft sheet.

L14 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2002 ACS
1977:172393 Document No. 86:172393 Electroconductive **polymers**. Tanaka, Norio (Pentel Co., Ltd., Japan). Japan. Kokai JP 52013594 19770201 Showa, 4 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1975-89534 19750722.
AB 9-(2-Hydroxy-3-acryloyloxypropyl)xanthene (I) [62606-94-4] is prepd. and polymd. with Et acrylate (II) or styrene and the copolymers are treated with electron acceptors to give elec. conductive **polymers**. Thus, a mixt. of xanthene [92-83-1] 36, glycidyl acrylate [**106-90-1**] 32, and xylene 100 parts was stirred 5 h at -2.degree. to give I. The above I soln. 62, II 5, and xylene 72 parts were warmed to 70.degree., stirred in the presence of 0.04 part **azoisobutyronitrile** for 10 h, cooled to 40.degree., and treated 6 h with 10 parts tetracyanoethylene [670-54-2] to give a viscous **polymer** [62606-96-6] soln. The soln. was cast into a film having surface resistivity 81 .OMEGA.-cm.

L14 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2002 ACS
1976:18051 Document No. 84:18051 Oligomers from alcohols and .alpha.-epoxy compounds. Mizuno, Kozo; Takagi, Kunihiko; Oonishi, Nobuya (Unitika Ltd., Japan). Japan. Kokai JP 50095225 19750729 Showa, 3 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1974-428 19731226.
AB Aliph. and arom. methylol compds. Z(CH2OH)n (Z = amide or urea residue, n = 1-6), e.g. HOCH2CH2CONHCH2CH2OH (I) [52845-23-5], react with .alpha.-epoxy compds., e.g. glycidyl acrylate [**106-90-1**] or glycidyl methacrylate (II) [106-91-2], to give title compds.

[CH2:CRZ1(CH2)mCH(OH)CH2O]1Z(CH2OH)n-p, where R = H, alkyl, halo, or haloalkyl, Z1 = ester, amide, or ether group or CH2CH2, m = 0-3, and p = 1-5. Thus, I and II reacted in presence of Et3N at 95-100.degree., and the EtOH-sol. product (contg. no epoxy groups) was polymd. in presence of uv and of benzophenone or by heating with **azobisisobutyronitrile** to give a **polymer** insol. in EtOH.

L14 ANSWER 18 OF 25 CAPLUS COPYRIGHT 2002 ACS
1975:515067 Document No. 83:115067 **Polymerization** of 3-methoxy-2-methylpropyl acrylate and methacrylate. Gueniffey, Henri; Rubon, Francois; Pinazzi, Christian (Lab. Chim. Physicochim. Org. Macromol., Le Mans, Fr.). C. R. Hebd. Seances Acad. Sci., Ser. C, 280(23), 1409-11 (French) 1975. CODEN: CHDCAQ.
AB Radical polymn. of 3-methoxy-2-methylpropyl acrylate and methacrylate monomers 18 hr in C6H6 at 80.degree. in presence of **azobisisobutyronitrile** gave 70-80% yields of solid amorphous **polymers** sol. in org. solvents and of mol. wt. 60,000 and 80,000 resp. Anionic polymn. yields for the acrylate were 40% in PhMe contg. BuLi but little **polymer** was formed in THF contg. Na naphthalene catalysts. Polymn. yields for the methacrylate were 60% in PhMe and .ltoreq.30% in THF. All the polyacrylates prepd. had m.p. >280.degree.. Acid hydrolysis and the action of **diazomethane** on the polyacrylates produced by radical polymn. gave atactic products whereas the hydrolysis products from anionic **polymers** were isotactic. Hydrolysis products of the polymethacrylate obtained by radical polymn. and anionic polymn. in THF were syndiotactic whereas those from **polymers** prepd. in PhMe were isotactic.

L14 ANSWER 19 OF 25 CAPLUS COPYRIGHT 2002 ACS
1974:492216 Document No. 81:92216 Hydrophilic **polymer**. Nakanishi, Toshio (Matsushita Electric Works, Ltd.). Japan. JP 48036191 B4 19731101 Showa, 3 pp. (Japanese). CODEN: JAXXAD. APPLICATION: JP 1970-973 19691228.
AB Glycidyl methacrylate (I) [106-91-2] or glycidyl acrylate [**106-90-1**] is treated with glucosamine (II) [3416-24-8], glucamine [488-43-7] or trimethylolaminomethane [77-86-1] to give a hydrophilic compd. which is homopolymd. or copolymd. in the presence of Bz2O2 or **azobisisobutyronitrile** as catalyst, giving a hydrophilic **polymer**. Thus, 312 g I was treated with 179 g II in 300 ml AcNMe2 at 80.deg. for 5 hr under N to give a divinyl compd. [52017-92-2], which (4.63 g) was mixed with 0.484 g Bz2O2 and the mixt. was cast polymd. 10 hr at 80.deg., giving a colorless transparent **polymer** [52017-98-8] with moisture absorption 42% (ASTM D-570).

L14 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2002 ACS
1974:478498 Document No. 81:78498 Copolymer. Sasaki, Yoshimasa (Honney Chemicals Co., Ltd.). Japan. JP 48037145 B4 19731109 Showa, 3 pp. (Japanese). CODEN: JAXXAD. APPLICATION: JP 1969-61877 19690804.
AB A copolymer is prepd. by reacting modified gelatin with acrylonitrile (I) [107-13-1], Me methacrylate [80-62-6], and (or) methacrylic acid [79-41-4] using **azobisisobutyronitrile**(II) as polymn. catalyst in org. solvent mixts., e.g., MeOH-C2H4Cl2, in the presence of glycidyl methacrylate (III) [106-91-2] or glycidyl acrylate [**106-90-1**]. Thus, a mixt. of 30g gelatin and 10g Ac2O was heated 2 hr at 60.deg., and treated with 20g BzCl. The whole mixt. was heated 4 hr at 70.deg., and excess BzCl was removed under reduced pressure, giving a residue which was washed with 100g MeOH, and dissolved in 150:150 (g) MeOH-C2H4Cl2 to give a 10% soln. The soln. (300 g) was heated under a stream of CO2 to remove 150g solvent and mixed with III 7, I 15, and II 0.1 g. The mixt. was heated 2 hr at 64.deg. under reflux, and treated with addnl. 0.1g II. The reaction was continued for 10 hr. The product was dild. with a mixt. of equal amts. of C2H4Cl2, MeOH, and DMF to give a 10% soln. The dry film

obtained from the soln. was transparent. The soln. was coated on a polyurethane leather substitute and dried 3 min at 80.deg., giving good fluffiness and touch.

L14 ANSWER 21 OF 25 CAPLUS COPYRIGHT 2002 ACS
1973:85077 Document No. 78:85077 Photopolymerization of epoxy monomers. Schlesinger, Sheldon Irwin (American Can Co.). U.S. US 3708296 19730102, 8 pp. (English). CODEN: USXXAM. APPLICATION: US 1968-753869 19680820.
AB An aryldiazonium compd. e.g. p-chlorobenzenediazonium hexafluorophosphate (I) [1582-27-0], p-morpholinobenzenediazonium hexafluoroarsenate [30406-37-2], or 2,4-dichlorobenzenediazonium hexachloroantimonate [38715-91-2] was mixed with an epoxide monomer and the mixt. was exposed to light to **polymerize**. Thus, a photoresist plate suitable for acid etching was prepd. by coating a steel plate with a mixt. of 97 g 60% ECN 1299 in toluene, 95 ml acetonitrile, and 2.91 g I. The plate was exposed 10 min through a photographic negative pattern to a C arc at a distance of 3 ft, washed with acetone, heated 15 min at 180.deg., and etched with HNO3.

L14 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2002 ACS
1972:421750 Document No. 77:21750 Crosslinking **polymers**. D'Alelio, Gaetano F. U.S. US 3654240 19720404, 6 pp. Continuation-in-part of U.S. 3,530,100 (CA 73;121267h). (English). CODEN: USXXAM. APPLICATION: US 1966-581688 19660926.
AB Crosslinked acrylate **polymers** were prepd. by treating acrylic acids or anhydrides with a linear propylene oxide **polymer**, and treating the product with carboxylic acids, chlorides, or isocyanates. The linear epoxide-contg. **polymer** could also be treated with oleic, lineolic, and linolenic acid to yield **polymers** contg. an unsatd. fatty ester, which could be exposed to O and converted to insol., infusible products. Thus, 45 parts glycidyl acrylate [**106-90-1**] and 55 parts MeCOEt under N was treated with 0.5 part **azobisisobutyronitrile** at 75-80.deg. for 2 hr to form an epoxy-contg. homopolymer, which was treated (127 parts) with 282.5 parts oleic acid [112-80-1] at 180.deg. to form the crosslinkable **polymer** (I). Films cast from a 35% I soln. in toluene contg. 0.05% metallic naphthenate drier were insol. in toluene, acetone, and hexane.

L14 ANSWER 23 OF 25 CAPLUS COPYRIGHT 2002 ACS
1972:73733 Document No. 76:73733 Preparation of **diazonium** salt-monomer adducts. Horiguchi, Seijiro; Nakamura, Michie (Dainichiseika Color and Chemicals Manufg. Co., Ltd.). Japan. JP 46007827 B4 19710226 Showa, 27 pp. (Japanese). CODEN: JAXXAD. APPLICATION: JP 19671109.
AB **Polymers** were prepd. in the presence of an aromatic **diazonium** salt, and the aromatic residues linked to the **polymer** chain were subjected to **diazo** coupling to give abrasion, wash, and solventfast colorants for textiles (polyester, acrylics, cotton), paper, leather, wood, metal, rubber, plastic, detergent, ink, and paint. For example, acrylamide (I) [79-06-1] was polymd. in the presence of **diazotized** m-(3-hydroxy-2-naphthamido)aniline (II) [4880-11-9] (stabilized with ZnCl2) and TiCl3 and the **polymer** was coupled with **diazotized** 3-amino-4-methoxybenzamide (III) [17481-27-5] to give a **polymeric** colorant which was directly used as a colorant or subjected to further modification, e.g., condensation with melamine [108-78-1] and formaldehyde [50-00-0] followed by methylolation. Emulsion polymn. of Bu acrylate [141-32-2], vinyl acetate [108-05-4], vinylidene chloride [75-35-4], and I in the presence of K2S2O8 and the colorant prepd. gave a printing paste. Other monomers used for prepn. of the **polymeric** colorants were, e.g., N-methylmethylolacrylamide [34233-96-0], methacrylamide [79-39-0], glycidyl acrylate [**106-90-1**], 2-hydroxyethyl acrylate

[818-61-1], Me methacrylate [80-62-6], glycidyl methacrylate [106-91-2], Bu glycidyl itaconate [34230-92-7], and 4,6-bis(N-butoxymethylamino)-2-vinyl-s-triazine [34233-97-1]. Amines also used for the **diazotized** component were, e.g. m-(acetoacetamido)aniline [34233-98-2], N-(acetoacetyl)-4-aminophthalimide [34233-99-3], 5-hydroxy-1-naphthylamine [83-55-6], and 1-(p-aminophenyl)-3-methyl-5-pyrazolone [6402-08-0]. The amines used for the coupling reactions were, e.g., 2-nitro-4-chloroaniline [89-63-4], 1-aminoanthraquinone [82-45-1], 2-(ethylsulfonyl)-5-trifluoromethylaniline [382-85-4], 2',3-dimethyl-4-aminoazobenzene [97-56-3], 2-aminobiphenyl [90-41-5], and 2-benzamido-4-chloro-5-methoxyaniline [34234-01-0].

L14 ANSWER 24 OF 25 CAPLUS COPYRIGHT 2002 ACS

1970:521504 Document No. 73:121504 Soluble, oil-, water-, and dust-repellent copolymers. Greenwood, Edward J. (du Pont de Nemours, E. I., and Co.). Ger. Offen. DE 2009355 19700903, 60 pp. (German). CODEN: GWXXBX. PRIORITY: US 19690227 - 19690819 19690819.

AB Sol. oil-, water-, and dust-repellent copolymers were prepd. from alkyl and glycidyl acrylates and methacrylates. Thus, Bu methacrylate and glycidyl methacrylate were heated with **azobisisobutyronitrile** in a mixt. of trichlorotrifluoroethane and dichlorotetrafluoroethane to give a copolymer which was dispersible in CCl2:CHCl. This and similar **polymers** were dispersed in CCl2:CHCl and mixed with a soln. of tris(behenoyloxymethyl)tris(methoxymethyl)melamine, paraffin wax, and chlorinated polyethylene in CHCl:CCl2. Fabrics padded in the resultant soln. had improved oil-, water-, and dust-repellency.

L14 ANSWER 25 OF 25 CAPLUS COPYRIGHT 2002 ACS

1967:433169 Document No. 67:33169 **Polymers** containing chromophoric groups. (Dainichiseika Color and Chemicals Manufg. Co., Ltd.). Neth. Appl. NL 6611048 19670207, 84 pp. (Dutch). CODEN: NAXXAN. PRIORITY: US 19650806.

AB The title **polymers** are prepd. by **diazotizing** triamino metal phthalocyanine in a HCl-contg. aq. soln. The amt. of HCl is .gtoreq.11 times the stoichiometric amt. The **diazotized** product is stabilized with an org. acid, inorg. acid, org. acid, inorg. acid, or heavy metal salt and mixed with an addnl. **polymerizable** monomer. After polymn., a metal phthalocyanine-bonded **polymer** is obtained. The general formula for metal phthalocyanine is I, where M is Cu, Co, or Ni. It may have a variety of substituents on the outer benzene rings. Thus, 40 parts by wt. (as solid) 4,4',4"-triamino Cu phthalocyanine blue-HCl paste, prepd. by condensation of 4-nitrophthalimide and phthalimide (mole ratio 3:1) in the presence of CuCl and redn. of the NO2 groups of the condensate to NH2 groups with SnCl2, were thoroughly mixed with 200 parts 35% aq. HCl and dild. to 1300 parts with melting ice. Then, 12 parts NaNO2 was added and the excess HNO2 decompd. with sulfamic acid, using KI-starch paper. To the aq. soln. of **diazotized** Cu phthalocyanine blue, 27 parts ZnCl2 was added to give the Cu phthalocyanine blue tristabilized **diazonium** salt. The salt was salted out and filtered. The stabilized **diazonium** paste was dissolved in H2O and dild. to 1500 parts. Acrylamide 100, Me acrylate 30, and Bu acrylate 10 parts were added to the above aq. soln. The mixt. was kept at room temp. for 20 min. and heated at 65.degree. for 120 min., upon which addn. polymn. took place with foam formation. The polymn. was complete after the foam formation ceased, the stabilized **diazonium** salt initiator being decompd.; 4500 parts MeOH was added to ppt. the **polymer**. The title **polymer** was obtained on filtration of the powder, washing with 1000 parts MeOH, and air drying.

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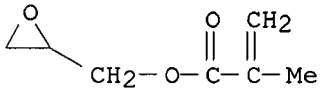
L15 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN **106-91-2** REGISTRY
CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Methacrylic acid, 2,3-epoxypropyl ester (6CI, 7CI, 8CI)
OTHER NAMES:
CN (.+-.)-Glycidyl methacrylate
CN 2,3-Epoxypropyl methacrylate
CN 2-[(Methacryloyloxy)methyl]oxirane
CN 3-Methacryloyloxy-1,2-epoxypropane
CN Acryester G
CN Blemmer G
CN Blemmer GMA
CN Blemmer GP
CN Blemmer GS
CN Epoxypropyl methacrylate
CN Glycidol methacrylate
CN Glycidyl .alpha.-methylacrylate
CN Glycidyl methacrylate
CN Light Ester G
CN Sartomer 379
CN SR 379
CN SY-Monomer G
FS 3D CONCORD
DR 122785-80-2, 126872-19-3, 55279-88-4, 96778-02-8, 98104-93-9, 89678-75-1, 117955-24-5, 169957-95-3, 201732-55-0, 203300-26-9, 210093-72-4
MF C7 H10 O3
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DETHERM*, EMBASE, ENCOMPPAT, ENCOMPPAT2, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TOXLIT, ULIDAT, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3742 REFERENCES IN FILE CA (1967 TO DATE)
1891 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3745 REFERENCES IN FILE CAPLUS (1967 TO DATE)
28 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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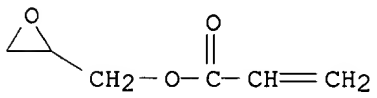
L16 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN **106-90-1** REGISTRY
CN 2-Propenoic acid, oxiranylmethyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Acrylic acid, 2,3-epoxypropyl ester (6CI, 8CI)
OTHER NAMES:
CN (.+-.)-Glycidyl acrylate
CN 2,3-Epoxypropyl acrylate
CN Epoxypropyl acrylate
CN Glycidyl acrylate
CN Glycidyl propenoate
FS 3D CONCORD
DR 130232-45-0, 69960-65-2, 70404-76-1
MF C6 H8 O3
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, ENCOMPPAT, ENCOMPPAT2, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TOXLIT, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

630 REFERENCES IN FILE CA (1967 TO DATE)
235 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
630 REFERENCES IN FILE CAPLUS (1967 TO DATE)
35 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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L18 ANSWER 34 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 1983:2491 CAPLUS
DN 98:2491
TI Three-dimensional carrier of an inorganic porous material-reactive polymer
IN Kalal, Jaroslav; Tlustakova, Marie
PA Ceskoslovenska Akademie Ved , Czech.
SO U.S., 7 pp. cont.-in-part of U.S. Ser. No. 847,259, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4332694	A	19820601	US 1979-98343	19791129
	CS 187785	B	19790228	CS 1976-7319	19761112
	CS 187786	B	19790228	CS 1976-7320	19761112
PRAI	CS 1976-7319		19761112		
	CS 1976-7320		19761112		
	US 1977-847259		19771031		

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L22 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 1983:2491 CAPLUS
DN 98:2491
TI Three-dimensional carrier of an inorganic porous material-reactive polymer
IN Kalal, Jaroslav; Tlustakova, Marie
PA Ceskoslovenska Akademie Ved , Czech.
SO U.S., 7 pp. cont.-in-part of U.S. Ser. No. 847,259, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4332694	A	19820601	US 1979-98343	19791129
	CS 187785	B	19790228	CS 1976-7319	19761112
	CS 187786	B	19790228	CS 1976-7320	19761112
PRAI	CS 1976-7319		19761112		
	CS 1976-7320		19761112		
	US 1977-847259		19771031		

AB Three-dimensional carriers consisting of inorg. porous materials (e.g., glass, silica gel, asbestos) and 0.001-95% of nonextractable sorbed reactive polymers contg. epoxy groups are prepd. for use in immobilizing biol. active compds., e.g., enzymes, as well as dyes, complex-forming compds., and other compds. The carriers may be prepd. either by coating the inorg. material with a monomer, which then is polymd., or by depositing a soln. of a prepd. polymer (d.p. <103) on the inorg. material. The compds. to be immobilized may be bonded either directly, through the epoxy groups of the polymers, or the epoxy groups may be replaced with other reactive groups. Thus, a soln. of 2,3-epoxypropyl methacrylate was deposited on controlled-pore glass by distn. in vacuo, and .alpha.,.alpha.'-**azobis**[isobutyronitrile] was added to the suspension to initiate polymn. of the monomer. A carrier prepd. in this way, contg. poly(2,3-epoxypropyl methacrylate), then was treated with a soln. of chymotrypsin at 4.degree. for 60 h to immobilize the enzyme.
AB Three-dimensional carriers consisting of inorg. porous materials (e.g., glass, silica gel, asbestos) and 0.001-95% of nonextractable sorbed reactive polymers contg. epoxy groups are prepd. for use in immobilizing biol. active compds., e.g., enzymes, as well as dyes, complex-forming compds., and other compds. The carriers may be prepd. either by coating the inorg. material with a monomer, which then is polymd., or by depositing a soln. of a prepd. polymer (d.p. <103) on the inorg. material. The compds. to be immobilized may be bonded either directly, through the epoxy groups of the polymers, or the epoxy groups may be replaced with other reactive groups. Thus, a soln. of 2,3-epoxypropyl methacrylate was deposited on controlled-pore glass by distn. in vacuo, and .alpha.,.alpha.'-**azobis**[isobutyronitrile] was added to the suspension to initiate polymn. of the monomer. A carrier prepd. in this way, contg. poly(2,3-epoxypropyl methacrylate), then was treated with a soln. of chymotrypsin at 4.degree. for 60 h to immobilize the enzyme.
IT 110-86-1D, **nucleotides** 9000-92-4 9001-05-2 9001-08-5
9001-15-4 9001-33-6 9001-34-7 9001-37-0 9001-42-7 9001-57-4
9001-60-9 9001-73-4 9001-75-6 9001-78-9 9001-92-7 9001-99-4
9002-01-1 9002-07-7 9002-10-2 9002-13-5 9004-07-3 9012-54-8
9012-56-0 9014-06-6 9027-41-2 9027-68-3 9028-86-8 9031-44-1
9031-55-4 9031-98-5 9032-08-0 9032-75-1 9032-92-2 9035-73-8
9035-82-9 9067-84-9 55576-43-7
RL: PROC (Process)
(immobilization of, on inorg. material-polymer compn. carriers)
IT 106-90-1 **106-91-2** 106-92-3 123-36-4 930-22-3 3678-15-7
3814-58-2 6790-37-0 6790-38-1 10353-53-4 19900-48-2 23584-01-2
25067-05-4 26374-91-4 44605-74-5 45719-86-6 55553-02-1

55750-22-6 61615-02-9 63623-06-3 70235-57-3 71510-07-1
74891-77-3 83201-23-4 83201-24-5 83201-25-6 83201-26-7
83201-29-0 83201-30-3
RL: ANST (Analytical study)
(in carriers prepn., for immobilization of biol. compds.)

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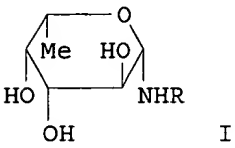
=> d ibib abs 1-5

L5 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1981:425452 CAPLUS
DOCUMENT NUMBER: 95:25452
TITLE: Covalent addition of biologically active agents to polymers. IV. Synthesis of ("affinity") adsorbents containing L-fucose derivatives
AUTHOR(S): Klyashchitskii, B. A.; Pozdnev, V. F.; Beier, E. M.
CORPORATE SOURCE: Inst. Biol. Med. Khim., Moscow, USSR
SOURCE: Zh. Obshch. Khim. (1981), 51(1), 204-9
CODEN: ZOKHA4; ISSN: 0044-460X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI



I

AB Treatment of fucopyranosylamine I (R = H) with R1NH(CH2)5CO2H (R1 = CO2CMe3) gave 84.2% I [R = CO(CH2)5NHR1] which was deblocked with HCl-dioxane followed by treatment with BrCN-modified Sepharose 4B to give I [R = CO(CH2)5NHC(:NH)OQ (Q = **Sepharose polymer**)] useful as an affinity adsorbent. A similar modified Sepharose 4B adsorbent was obtained from p-aminophenyl .beta.-L-fucopyranoside.

L5 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1980:489110 CAPLUS
DOCUMENT NUMBER: 93:89110
TITLE: Syntheses and biological activities of thyroliberin analogs and a thyroliberyl-agarose complex
AUTHOR(S): Shiraki, Masaru; Kokubu, Tomokuni; Sawano, Shinji
CORPORATE SOURCE: Res. Inst. Polym. Text., Tsukuba, Japan
SOURCE: Kenkyu Hokoku - Sen'i Kobunshi Zairyo Kenkyusho (1979), (120), 23-37
CODEN: SKZHA8; ISSN: 0371-0807
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB Thyroliberin [24305-27-9] analogs were prepd. and their TSH [9002-71-5]-releasing activity was studied. Pyroglutamic acid (PCA)-His-X-NH2, where X = Phe, Tyr, or Trp, did not have TSH-releasing activity. The activity of PCA-His-Pro-NH(CH2)nCO-Y, where Y is NH2 or NH(CH2)3Me, decreased as the value of n was increased. In contrast, the activity of PCA-His-Pro-[(NHCH2)nCO]m-OH, where n = 0-5 and m = 0-2, increased with increasing chain length between Pro and the terminal carboxyl group. An insol. thyroliberyl-**Sepharose polymer** released TSH from rat pituitaries in vitro. Structural and conformational requirements for the biol. activity of the thyroliberin analogs are discussed.

L5 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1976:101430 CAPLUS
DOCUMENT NUMBER: 84:101430
TITLE: New coenzymically-active soluble and insoluble macromolecular NAD+ derivatives
AUTHOR(S): Zappelli, Piergiorgio; Rossodivita, Antonio; Prosperi, Giulio; Pappa, Rosario; Re, Luciano

CORPORATE SOURCE: Snam Progetti S.p.A., Monterotondo, Italy
SOURCE: Eur. J. Biochem. (1976), 62(1), 211-15
CODEN: EJBCAI
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Reaction in Me2SO of nicotinamide 8-bromoadenine dinucleotide with the Na2 3-mercaptopropionate afforded nicotinamide-8-(2-carboxyethylthio)adenine dinucleotide, a new NAD analog functionalized at the adenine C-8 position by an .omega.-carboxylic side chain. Carbodiimide coupling of the latter deriv. to high-mol.-wt. water-sol. (polyethyleneimine and polylysine) and insol. (aminohexyl-**Sepharose**)**polymers** gave the corresponding macromol. NAD analog. These derivs. were enzymically reducible. The polyethyleneimine analog showed a substantial degree of efficiency relative to free NAD with yeast alc. dehydrogenase (47%) but a considerably lower one with rabbit muscle lactate dehydrogenase (3%); the polylysine analog showed a low degree of efficiency with both enzymes(5-6%).

L5 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1975:455160 CAPLUS
DOCUMENT NUMBER: 83:55160
TITLE: Synthesis of coenzymically active soluble and insoluble macromolecularized NAD+ derivatives
AUTHOR(S): Zappelli, Piergiorgio; Rossodivita, Antonio; Re, Luciano
CORPORATE SOURCE: SNAM Progetti S.p.A., Monterotondo, Italy
SOURCE: Eur. J. Biochem. (1975), 54(2), 475-82
CODEN: EJBCAI
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Alkylation at N-1 of the NAD adenine ring with 3,4-epoxybutanoic acid, followed by chem. redn. to the alkali-stable NADH form and alk. Dimroth rearrangement, gave the NADH deriv. alkylated at the exocylic adenine NH2 group. Enzymic reoxidn. of the latter deriv. gave nicotinamide-6-(2-hydroxy-3-carboxypropylamino)purine dinucleotide, a functionalized NAD analog carrying an .omega.-carboxyalkyl side-chain at the exocyclic adenine NH2 group. Carbodiimide coupling of the latter deriv. to high-mol.-wt. water-sol. (polyethyleneimine, polylysine) and insol. (aminohexyl-**Sepharose**) **polymers** gave the corresponding macromolcularized NAD analogs. These derivs. were enzymically reducible. The polyethyleneimine and polylysine analogues showed a substantial degree of efficiency relative to free NAD with rabbit muscle lactate dehydrogenase (60 and 25% resp.) but a lower one with yeast alc. dehydrogenase and Bacillus subtilis alanine dehydrogenase (2-7%). The polyethyleneimine deriv. entrapped in cellulose triacetate fibers together with the lactate dehydrogenase was operationally stable during repetitive use.

L5 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1972:512321 CAPLUS
DOCUMENT NUMBER: 77:112321
TITLE: Comparison of the protein-binding capacities of cyanogen bromide-activated polysaccharides
AUTHOR(S): Yunginger, John W.; Gleich, Gerald J.
CORPORATE SOURCE: Dep. Pediatr., Mayo Grad. Sch. Med., Rochester, Minn., USA
SOURCE: J. Allergy Clin. Immunol. (1972), 50(2), 109-16
CODEN: JACIBY
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Techniques for chem. coupling of allergens to insol. polysaccharides have permitted the development of the radioallergosorbent test (RAST) to measure reaginic antibodies. To date these allergens have been those contained in crude com. allergy exts. Because these allergens are not

well characterized, quant. measurements of the amts. coupled to the polymers have not been possible. Several different polysaccharide polymers were examd. for their ability to bind bovine serum albumin (BSA) and ragweed antigen E (AgE) by use of different activation procedures with CNBr. The capacity of the polymers to bind these antigens was assessed by examg. the allergen-particle complex for uptake of radioactivity (BSA) or by measurement of allergen by radioimmunoassay (AgE). **Sepharose polymers** were the most efficient in binding antigen but tended to trap uncoupled antigen in the gel interstices.

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